



Scaling the Tower of Babel.

The impact of including foreign language articles in a large scale systematic review

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Background

Ideally systematic reviews should include all relevant evidence to answer a given research question. However, in practice there is a trade-off between budgetary and time constraints and the inclusion of studies in languages other than English (LOE).¹ Current guidance recommends identifying papers in LOE and giving consideration as to whether language restrictions may bias the results of the review.¹ An issue which does not appear to have been fully considered is how excluding papers in LOE from systematic reviews might impact on the credibility of the review in the eyes of stakeholders.

We were commissioned to conduct a systematic review of photodynamic therapy (PDT) for the treatment of pre-cancerous skin conditions, Barrett's oesophagus and cancers of the biliary tract, brain, head and neck, lung, oesophagus and skin.² PDT is a controversial topic area, often generating polarised opinions. The team needed to demonstrate their commitment to an objective, thorough, unbiased review of all the relevant evidence. PDT is used and researched across the world, leading us to believe that relevant studies might exist outside the English language literature. We decided to identify and include papers in LOE as part of our strategy to enhance the credibility of our review in the eyes of stakeholders.

Objective

To explore the impact of a recent decision to include studies in LOE in a large-scale systematic review of PDT.

Methods

We followed standard systematic review methodology.¹ This involved developing an extensive search strategy including electronic databases, conference abstracts, unpublished studies, contact with experts and manufacturers, and assessment of existing reviews. Published and unpublished studies from any country in any language were eligible for inclusion. All studies which met our stated inclusion criteria were included in the systematic review, data extracted, quality appraised and synthesised. Studies that met all inclusion criteria except for study design criteria (not randomised controlled trials or controlled trials) were included in a scoping review; bibliographies by cancer site or condition were included within the final report to provide a comprehensive map of the evidence. (Time and resource constraints precluded further appraisal of this evidence).

We engaged native speakers or experienced translators to help identify, categorise and, where appropriate, data extract papers in LOE.

Results

The search strategies identified 12,522 references. Of the 1,304 full papers ordered, 33 studies in LOE were identified as possibly relevant to the systematic review. Of these, one trial published in Chinese, was included³ (see Table). The included trial, on palliative photodynamic therapy for oesophageal cancer, had 60 participants. It was the only RCT to compare PDT and standard radiotherapy in this patient group. The trial had a longer follow-up (up to 10 years) than the other eight English language trials in the group (up to 3 years). It reported a survival advantage of PDT and radiotherapy when compared to radiotherapy alone. Adverse events were similar to those reported in English language papers.

There were 1,004 publications that met all the inclusion criteria except study design, which were included in the scoping review bibliographies. Of these 142 (14%) were in LOE, with percentages ranging from 2% to 20% across the sites and conditions explored (see Table).

Table: Studies identified for the review

Cancer site / condition	Studies meeting all criteria for the systematic review		Studies meeting all criteria except study design	
	Total number of studies	Number of studies in LOE	Total number of studies	Number of studies in LOE
Pre-cancerous skin conditions	35	0	133	27
Skin cancer	13	0	235	32
Barrett's Oesophagus	11	0	107	2
Oesophageal cancer	13 (5 curative, 8 palliative)	1 (palliative)	150	21
Lung cancer	7	0	177	35
Biliary tract cancer	5	0	30	1
Brain cancer	2	0	43	4
Head and Neck cancer	4	0	129	20
Total	90	1	1,004	142

Discussion

In terms of results, the impact of including papers in LOE for this systematic review was small. The inclusion of the Chinese trial reinforced our conclusions on the safety of PDT in palliative treatment for oesophageal cancer by reporting similar adverse events despite having a longer follow-up. However it did not change our overall conclusions on the lack of high quality definitive evidence in this particular cancer site (and indeed across the review). It could be argued that the identification and inclusion of papers in LOE was not a worthwhile use of extra resources. However, the proportion of research relevant to PDT, published in LOE is relatively large, as witnessed by the number of publications meeting all the inclusion criteria except for study design. Failure to acknowledge and include this body of literature in the scoping review would have been to ignore up to 20% of the possible relevant research.

Additionally, a key conclusion emerging from this review was the paucity of well-conducted randomised controlled trials in this area. As a result of this we were generally unable to make definitive statements about the effectiveness of PDT across the conditions and sites investigated. An important outcome of the review, therefore, was to encourage the conduct of further, more rigorous research. We believe that our commitment to identifying all the relevant literature, including that in LOE, enabled us to state with increased confidence the need for better quality research in this area.

In addition to considering the potential impact of language restrictions on the results of a review, systematic reviewers might also wish to consider the impact on a review's credibility and acceptability by stakeholders.

References

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3. Zhang JW, Wang JH, Liu FW. [Analysis of long term survival on radiotherapy combined with photodynamic therapy for advanced esophageal cancer] Zhong Guo Yi shi 2003; 5: 1058-60.

This poster is based on research commissioned by the NIHR HTA programme on behalf of the National Clinical Director for Cancer and the Scottish Government Health Directorates. The views expressed in this poster are those of the authors only and not necessarily those of the Department of Health, the Scottish Government Health Directorates, the NIHR or the NHS.

